RECORD

F. R. Fabrig

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Collection and Field Note Book

No. 50

(Nov. 30, 1957 - Jan. 26, 1958)

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A BOORUM & PEASE PRODUCT

1957 Thailand nov. 30 - road eastward Liam had of gulf of them between the road and the sea are covered by locally by a purple Swalda (5. Printierso?), more generally by mangroves mostly avicennia The avicennia is mostly only 1 - 2 m, tall and seems to be harrested regularly for wood - bundles of wood ranging from finger size to wist size are piled along the road and different patches are of different average heights. Occasionalli expecially faither east, are taller patches of Phizophna, the still roots very low, appearing to be about Im. tall. In some areas the mangrove has been cleared and commute planted on windrow of soil. the road forms the boundary between saling and more saline conditions. On the seaward side there is little cultivation, in the landward side all is cultivated or in canals which are intensively saced for bishing on awall fish.

19:7 7 hailand 2 Dec. 1 - Satalif - headlands Dec. 1 Ko Kram (sland) covered by secondary scrub Flat coastal plan in vegetation showing striking side toward land, 1- 5 m. examples of wind growing, above high tide. Overed by a few especially radiating up from cultivated patches and much small cores and running thicket and grass. The up over the lower ridges. grass is in frast & pure sides of broad rivines stand of Heteropogon coming down to sea have contortus, the fruits twisted south exposures avered together in brunches (photos). by a low sent, north exposures Some of the apenings are a mireture of Imperata, by sembly tangled frests. Eupatorium, Heteropyon, etc. The thickets are a tangle of small trees and should, many of them semi-climbers, many very spring

Dec. ? - Bus trip Banglook to Purkie Central plain - vice land submerged except tops off leves. aquatic plants less own spiceous after leaving vicinity of Bangholi.

a few cult patches of Melumbium (floresering). agration seen in flower:

Nymphoides sp.

Sciepus grossus

S. malaccentis

Lyperus

Zizyphus trees on ward to be from seads thrown from cars.

Beford this the water is not in soil is and a dark olay like

Deer

1957 Thailand 8 Dec. 3 - Pulsae, northeast of tarabun 38924 Homora thicket on low prostrate, corolla white. on bare ground around - 25 Sida suffritescent herb; flower 2 26 Phragmiter karley caner 3 m, tall; paniels common is fusiform in general shape, bronze-green. 2 27 Solanum aff verbascifolium shout 2 m, tall leaver pale green beneath; flower white; fruit green. 2 28 Boerhavis diffusa prostrate, forming a broad common around mat, leaves pale green Cappaintly same population as beneath; flowers pink, ~~~ 38931, 38936) stamens mostly 2. 29 ypomoca twining in tall weedy growth; corolly tube campanulis mane in white stome limb purple, stamens straight, stegme capitate. 30 (gran) sprawling, elongate to occasional in 2-3 m. It arochaven differen same - on in open cleared field on low hill of disintegrating rock. 31 Brenhavia diffusa prostrate to somewhat abundant on assending; flowers hink, Capparently same populationas nos. 38928, slamens i; leaves sery 78976) grove beneath. 32 abutilon asiations occasional 33 andropogon caespitose; culms almost evet common

10 3 1957 Thailand 38934 Brokhytum 3 35 Emilia sonchifolia oscasional locally 2 36 Boerhaving liffung common (apparently zamepopulation as nos. 28928, 38931) Dec. 3 - tophuri 2 37 Portulain quadrifido L common locally in Nec. 3 - 10 km. east of Chainet 38 Dryga sating var. spontanea very common is edges of wit vice fields Dec. 3 - Chainat Dam, Chao store embankment of incide reservoir, flooded at highwater Dec. 3 - northeast of Wang Noi, Bentral Plain muddedges of ditch along in field 41 Monochoria ammon

flowers purple, not much exceeding unvolvere ascending, leaves whitish beneath; flowers pink, stamens mostly 2.)

prostrate, purplish, fleshy; flowers yellow, petals 4, stamms about 8.

culmiascending

prostrate, extensive; flower white; puit immatine.

prostrate; flowers white erect; flowers bright purplish blue Dec. 3 - Bus trif from Lopburi
to Chainat
The land very gradually
rises after leaving the very
flat lake bed area of
flat lake bed area
morimum on the word, of
about 500', before the descent
to the Central Plain at Chainat
starts.

listhe land uses cultivation becomes less, the scattered trees more abundent until thickets and patches of open frest from a mosaic with patcher of savanna and cultivation. many kinds of trees are involved, including Pipterocarpus alatus orbid Evrypha umbaculifera. The latter is locally common on the highest part of the was and most of the larger 8 anythetrees are in flower, a magnifreent sight. a few were

dying hast flowering and dying the descent starts cultivation increases. This carea is a cooperative home a steading project and is being cleared. The good for

Dec. 4 Chainal Dan Floating islands of pomolo aquatica cult, En Good (photo). Dec. 4 - Makkom farvan in rafts (photo). achier, as bitter crange, Tangerine Parhyritigus eroses, pomelo Dec. 4 Ban Daen, Nahonswen Whit jagged bills of masser limeston. Steeper slopes sparsely vegetated, lower slopes wooded. Many characteristic shrubs a cereoid Enghorpia, Drawanna. Alshenderma, Premn, Bridelia, etc. (photo) Drc. 4 - Taloh Barte remnants of old forest Du. 4 Kam Chaing het Dec. 4 - Chainat to nahan sawan - granite hills with this latorolic soil near road - soil on flat ground rather from, some under cultivating, some in thicket.

after leaving bills most of Rand is in ing, with scattered treerand termite munde - Mahonnawan & Tak - nather sterile soil for some distance with thickets, some cultivation. Then an isolated range of limestone bills. much of the country degraded to thickets of spiny bambos. Beyond Bamphot Chisi malinly flat country, formerly endently in mixed deciduous freet, clear of or degraded to varying extents. Degradation here estates an unusual form - the shrubs and small trees are taken out for charcoal, leaving mue aless the large trees. These locally are difference of (Hipterbrashun ship, therea sty.), locally fagerstroemig and many others. The areas where the trees are very sharse are

16 1957 Theiland Dec. 4 - Naktorn Lawan, 38942 alternanthera sessili, ? Chao Phrayo River prostrate, forming petals yellow, less than 4 43 Tribulus cistorides L. 1 cm, long. 44 Aphenoderman Dec. 4 Ban Daen, northwest of nation Lawan of flutes limestine 50-100m 44 Sphenodermu shrub z m. tall, occasional bacts and calyx pale green. 45 Hedystes all plants seen completely common in crevices 46 Premna shrub 1 m. Call 1 comman fruit green. 47 Premna should 1.5 m, tall, comma flowers pale green, scarcely any order. 2 48 Bridelia showly, elongate brander; common leaves glavicous beneath. fruit immature. 2 49 Trichosanther vine, climbing in bushes and moreles. flowers white fruit red, soft when ripe, repening from abical and. 2 50 achypanther on ledges

18 19 Dec. 4 Talok Barts, 50 km. 50m. near Khana, Colum, south east of Kam Phaeny Phet cleared flat land along road, 38951 Phaseblus twiner; flower with maron citys and standed yellow wings, pale green 2 Pentacme siamensi (Mig.) Kuy tree, sterile. 2 57 Hedyrtis under trees ered; plowers white 34 Diptercarpus obtusifolis tree 25 m. tall, took Is remaining from James fraces longitudinally fissured into ridges; leave, stipule and aralla from ground beneath tree. mae 4 55 Franklin Kam Phaeny Phet PingRiver woody plant about 1 m. parasitie on mango tree long branched; corollas laterally compressed, tube coral red, lother yellow with green area mear base.

20

Dec. 5 - from Tak to Thren The route he mostly over low welling hills covered by open fore. forme cultivation on along streams, but soil elsewhere very Then of else of a coard sand on fine grave derived from granite. for hills covered by quartite perbles and cooled embedded in clay soil, this almost al ended away leaving a sort of havenent. The front varies some in height and density but is south at best and selden has the Trees touching, innetimes very yen. grass or berter and low should between, some larger shruly. Cyrar saamenis comma the great is a very degraded "deciduous diffterocary" Type, several difiters enfor common but also various other trees. The whole area

seems to be burned frequently in the dry seams and is also heavily grazed. north of mac Phrilithe is a lower area of completely a almost completely cleared land, some in vice, some in thicket of various stages of development. Thitten gives way to sembly yourt again sping bamboo. a range of wooded hilly to the east who from north of MacPhil at least & Those which does not show in map.

26 38947 Cycas siamensis very young plants with "phycorrhiga, bown subterranen stem bulbous, worts fleshy. 68 (eeg.) tree small tree or large shoul. 69 Baneria ? common 70 Helicterez suffruteriest herb, stem verycommon ascending to spreading; glowers pringle. 71 Enfratorium orderatum herb 1-1.5 mitall, 72 telaginella generally flower lavender fraguet. in open, full sun. 73 (annon) fruit red eraplish 74 (Dig) Uraria rare 4 75 grewing low shrub ry to 0,6 m. tall. 76 Cureuma occasional, mostly steril. 2 77 (acantly) flower violet occasional 4 78 7 ernstræmig? Dec. 5 - Ban Masalik, 50 km. n of Tale, near Wang (River) in very ofren woodland on and around weathered! 79 granite boulders, warse soil Hedyotis flowers white. 80 Cassia chamacerista? flower yellow, calys maron. 31 Lindenia flowers purple and white.

28 1957 Thailand beaver, very glavious 38982 (arely) occasional, climbing y in busties. 83 Terminalia alata amall tree common 84 Lespedeza slende, about common Dec 5 - Thren Wary (River) × 85 Sterenlia pera in village, probably spontaneous. small trep our flower yellow, turning deep Dec. 9 - mountains between 5822 1900 Thoen and glo shrub, branched at 36 Desmodium Base; flowers blue-puff occasional on base road cuts and white. Dec. 5 - Slo 480 2. 2 87 Lalix small tree common along stream Nec. 5 - about so hm. south 43000 of Ban Hong, about 70 hm south of thing mai blower ros purple 39 (leg) common on open soul excessional in opening 90 Verbeng flowers magenta rare in opening

1957 Thailand Dec. 6 - ridge leading up to Boalina, east slope of Doi Suthes west of Chiang Mai - An thick frest broadleaf 1200 m evergreen frest, mainly Fagaceae 38995 andizia untranched, led, nane Im tall, fruits scarlet. 3. 96 Lithocarpus tree 10 m, tall, fruiting common turys lying on ground. - on grassy udge 120-140m with abundant showing evidence of fire. scattered trees and sambs, 97 Lygodium flexursum climbing on shrub, 3 98 farmons tracking The decending , very local to erect. 99 Polygonum chinense okkasional in margin decumbent to ascending flowers white fruiting of frest calys enlarged jelly-like rosette flat on ground, 39000 (gerne.) (or tenerium?) rare on offen calyx marry fruit yellow. 01 sonnerilly calryx red. nare 02 againstig erect; flower deep purple. common 03 (melan.) flower pink. rare in bone wil at edge of trail Of Justicia? flowers blue occasional 05 Justicia? cirolla jung, repper life recasimal edged with maron Of Hedystin above, white bereath, flowers white. occapinal

36 1957 Thailand 39018 Carex baccans nare 3 19 Helizing common 2 20 Dianella occasiona 21 Peperonia refilias 4 22 Blumea common 23 gleichenig linearis v. Gernying common 4 24 Indigotera 2 25 Feranthus rare, parasitic 24 Polybodium common shiplytic on tree trunks 27 (relia) 28 Columnes (a deachynanthus)
29 Vittaria 29 Vittaria occasional, chiphytic 30 Michannes 31 much of this of the many common

ground and allowed to

bling and burn.

Tea plantation here dates

from just after the war.

Carryen walls are

worded with a

conspicuous grass

understory, to Onytenaully,
also common in walang

places. at about 1700'

Dendrocalamy is very

abundant in places

forming a thick freek.

Dec. 3 - Huery Tand 2900' Photos of se firest with conspicuous Difiterocarpus costatus with tall white trunks and spreading crows. steep sloper here partly covered by firest, partly in tea plantations, the plantations mostly on rounded sprus, ravines wroded and containing small streams. The forest is tall, uneven, with generally a full canopy and many lianas. Trees perhape 30 mstall. Higher on rislger this frest is replaced by an everymen moist oak frest. This is apparently brimed frequently as undergrowth is sparse to absent.

1957. Thailand Dec. 7 - Kanyon teading 500-190m from the Raming Chiang Das, in Ravine with moist 39040 Spormorea evacines Twiner climbring on bushes, very common in weedy opening flower scarler. small tree, leaves in understory glaverus beneath. 42 Lelaginella 1 plant closely adherent on dry with cut above to substation. 43 telaginelly rainy seems fruiting branches erect. on dry rock out alrave trail wet in wing reason 44 felaginella evert. abundant on cut bank of trail 45 angiopteris fronds according, 3 m. long rare inear bottom of ravine longituding white marks, glalrous. 46 helaginella vogelii? Spring leaves itidescent. 4 47 Selsginella common or wet banks drooping, spiles compressed 48 Maria small slender tree, gregarious on steel works flowers white formilla? 50 Eulalia? bare road cuts branched, clongales layer in open frest fruiting culous erect, m. tall, spikes neddiel. 2 51 angresa formers, flowers nave along trail rose frugele.

1957 Thailand 46 39052 Lyworthia 802m 2000 53 Breig laens (Lam) Grisebr. derse clump, leaves purplish; flowers white. 53 a Drymania along trail 350 m. Hec. 7 - Ban Palas malliany mai 34 tem. n. of Chiang mai indrained rice frelis 2 st (gran) 55 Marsilea common white, fruit immature. 3 56 Jizzahuns Dec. 188 - Huey Tand, son mountains southwest of Chiang Das 950 m. along paths near small villages erect 3 m. tall, flowers 4 57 Sambucus white, some modified to yellow glands. sapan ha 3.74 "man" (nothern Thai) 58 Diorchea alet? L. nane in weedy thicket cream color; "malot, norther than 59 Elacagnus common 60 Trachne? elongate to 3-4 m. Jaming common in thicket, tangles. shirt 3 m. call flower 61 Solanum white, fruit immature. inthicket "fa pahy" (northern Thei) 4 62 occurimal branches elongate, flower yellow.

1457 Thailand 39090 (gruss) on web in thurshade 91 Smerilla 92 Panicum occasiona along trail 2 93 Torenia occasional 94 Paspalum rare along trail 3 95 Vriburnum occasional in understong 1- 96 (lab.) 2 97 micromelum? mare in undergrowt 2 98 Chelypteris octasimal 3 99 Dalbergin common 39100 (Conv.) of Impatiens undergrowt common 2 07 thelypteris very common 2 03 Coleris common 04 Osbachia dennin inch 2 04 arparagus occasional in open words 4 05 Styrage benzordes common in understory

blowers wing. flower white puffe should 3 m. Tall, bulonly. flowers lavender. Should my, tall should 2.5 m. Telp. twines, fruits blechy, reddish, immature, flowers funly. erect erect.

plant arching; fruit orange

small tree.

56 1957 Thailand 39123 They tey plantation 39123 They planted 24 Liegesbechies orientalist. weed in 2 25 Leucas sweed in 78 Vitis versicaly in thicket 27 Frygodium fleursung common 2 28 (acanty?) common weed 29 Totale The minging? stones in open words between Tin open woods 29 Flemmingia? common 20 Disharing 31 Ranwalfis 1 32 Centamen? Dec. 8 - ridge top about they Tard, montains southwest of chiang sto V of offen evergeen vale woods, burhad frequently 34 Centainey 38 Dendrobium? epiphytic

small tree 4 m. Call (mostly trimmediany a shout size), petals white everthere in tall her flower yellow. herbaceous vine leaves fleshed with white. climbing on shouly.

flower blue.

event herb, 1-2m, tale, Clower winning. Cruit black pendent, leaves glavious. fruit scarlet

1300-1400 m.

erect to (m. tall, flowers purple. Clower gallers

1957 Thailand 39134 Eurya · vecasional 2 33 Callicarps rane 36 Osbechia common 2 17 gran occasiona? 38 Chunkerzia alaka Sins orrasional 2 39 Crassocephalum 40 adenosteming 42 Rithacarpy common 43 antroplyum ? epiphytic 44 Vittaria chiphytic 45 Plectranthus or Coleus 46 (orelig) rune, etatelo epiglizzia 47 Hedyatis 48 Crotalaria 419 Desmodium 2 50 Desmodium reasimal

small understory tree fruit mufile. rosepines. Julals twiner; plower while. heads modding, redding to yellow. feowers white. purplish red, fruit reddish. trond, dried and curled. fronds dried and couled, glowers white. erect. flower yellow. purplish blue. flowers

small understoryling; 3915) Enconymus fruit rearles. occasional 1 52 amemum a occasional shub in the 5 33 grewing buit green. 2 54 Cleroderdrum bracks purple. July Sale Tang 2 55 Engratorium flowers white. Near Hurry Tard. bruit, red. 1 57 Commeling malodorous herb, glowen orange. 1 58 Tagetes around abandoned cultivated 59 bield flower purple PHANA PARANTON Dec. 9 - Huey Tond 950000 60 Clevodendrum fragrans herbage fretis when broken, coroller white 61 Phoele tree left in plantation

65 1457 Theirland 64 385 m Dec. 9. The Raming, south along stream in cultivated 39165 falix tetrasperma Roxb.

" single tree persisting

3 66 Eyanotis tree 12 m, tell, diffusely branched. clongate juicy vine, flowering branches in thich weeky growth, event, flower purple, I betali equal. 385 3. Dec. 9 - A. Me Ping (River), tagai above the Raming, Below Chiang Das small shrubby tree 67 falix tetrasperms Roxb. scattered tree along river amall shrubby tree 68 falix tetrasperma Roxb. 2 69 Polygonum edges of siver transles ered. fronds elongate, while like, 70 (for Thelyhteris niver bank producing mal plants. 460 m. Dec. 9 - Chiang Das Care 71 Foranthers Chiang Das flowers ocher yellow with green stripes on tube. parasitie on citrus in village It aleverites molevere willd. small tree. planted intemple ground 2 73 Spirodela polynhiza (L.) Schler floating in port

On east side of morenlains an extensive mostly rolling plain, the flattest areas in sparse wood, some of it young regrowth after culting. most of This frest reather an olive green. along river a strip of cultivates willage land, many damanes, there a beautiful dark green. Last of were a broad stry of rice culture. Then a broad area of serubby thicket and trees. More need around Lampany. Then town with many trees - Borasces, Lamana Rive fields with willages around one strip. Villages look like patcher of barboo and trees. Rice all harvested. Lord gray silt. Southeast of Lumpang desiccated gooddy fields with termite mounds with trees. Then afternating with rolling areas of semb, this spars and with scattered Then a small range of bulls with spanse freit with much bambro, this

with evidence of shifting agriculture. Fair riged river meandering through this valley. Knigh land to east very well wooded and mostly green, some trees losing leaves. Fouly slopes tending to be browning. forme cleanings mostly overgrown 9 few vice field, in places fouthway much more cleaning, freet Then high hells thickly moded but mostly with much bambro. form valley with excellent friests. along course considerable shifting cultivation but much less of it earloand. cross valleys almost entirely in treedess condition much overgrown with weeds. Considerable population in their valleys The front on the higher bulls is thick, but lenderey to howmen suggests that it is deciderous. Kouthway the bell begin & flatter out and the front becomes much more sparse. as land becomes flatter the increases! a road cuts

72 1957 Thailand

a lake in center, Chragmiles (1) ground it, a sizeably bymbro frout. the river is rather low with slying banks cultivated during low water season, as at Chuzeins do ful, Brazil. (Prob. tobacco). This at Pismuloh. form lotus fronde her. many fachagen abundant along air strip. Ime Imperate Below town ground is flat, mostly cultivated but looks dry. Amall ponds, ox boros, and frarallel sloughs mostly overgroun with floating vegetation. Inequally scattered trees in cultivated and fallow land. forme patcher here are marshy other seem a but too bigh for cultivation at least of rice! here small shallow lakes with patily of ploating regetation Large banana fratches. Considerate The river is a strip of darks green in light olive green plain.

Ox bows and old meandy

small asolated "island" lill of well. a muddy lake near it with marsh and irregular pratches of reeds (!) around of several attres hills in distance. Insundated land along tributary of more forme apparently gest long with the serve and patches of dry bambor. Then a morain of sultivation weedy ground, trateher of wood and bambos, seetlery trees in open land. a belt of wood east of the They ext a cluster of housing bills. Under course another such bull, mostly with bamboo, some woods! a large ones of words east of this, ratherserubby but not much disturbed, including a few mol small bills, dry on south slopes; much cultivated land in small cleaning southward along course. In distance a belt of cleaning along a road. Clusters of isolated small little protruding up through allura plain become more numerous southwarf

Eastward is large worked area, west of it knowly cleared fracture, immediately along course considerable rice, alternating will brushy patches, digland cultivation, etc. The fairly extensive patch of abright hills mentioned above is surrounded by cleared land mostly brushy a frasting, some cultivation. There will are probably sandstone (or granite?), rather reddish. Shirting south of them is a large canal. Westand south of the canal is vig land with numerous hees (or termite mounds), there becoming sparser rapidly westward, many small funds. This is just below Chainat. The rice fields here become definitely green instead of drate. Forme inundaled land na small lake with with 41 small elliptical floating gardens of pomocy equating (?) arranged in front of a small village. a considerable belt of very low land. West of it stry of village with

some slightly higher ground with tratche of rugar care. The village mue or less hidden by tres arranged roughly in a checkerboard frattern. The willings strips mostly follow small cunalry meandering channels. Cross river again and Coller it on west onde. Rice land her without trees. many old ox bows rant of nine a large invintated area. Landriche and on both sides of were marked by the meandering channels lined by willage strips hudden by tres. Many megular laker a incompated areas surrounded by mary and vis cultivation Lopburi in distance. (Photos) Where and more insundated land east of river Rice here is fraitly green partly harverted and how Brassus breally abundant around villages Crossed river to east, Broad areas of marshy land with abundany fronds

and changels on both side of river Village strips are apparently on natural lever here, from a complex pattern just above aguitheys. Telow it is mortly continuous lright green we with small scattered villager completely flooded. Water showing almost everywhere except on natural lever of never Villages seem small here and widely sentlers an proportion to area in vis. la east a wast griding of tree-lined canali and intervening via field. This partly yellow mostly green Kill along course bright green. Many Dorassus, Lome truck gardens. men village boundary levels between rie fields. more and more Truck garden, as Bounghole is approached. Villages become more numerous nearer Bangle &

84 a belt of clear dark water along months lowland along stream course - soil light tan or beige color more and more cultivation southeastern writerest of Pean Bang is many small yourds very sharply defined, Amall meandering very even though back of muddy stream, dark it is revary and flooded from grassland (?), many land. muddy fronds. I morain Lake very muddy of large areas of this, at esst end. fand with heattered trees, and around Bhat han Day light greenish ton insendated, village either cuttivated areas - Krasan low flating or on piling. and vicinity. They dry Harge expense of water cultivated land with below this, some floating brushy low land along grass, trees with stream courses. Many emerged crowns 9 freelds outlined by bredgerows. Facit of month in distance. water, channels Long inundated land downstream market with swamp and oravanna, by drying bare reddich patches of closely divided mud flats. more invulate cultivated grounds outlined land ther dry land and by bedgerows - they long cultivation south of areas of a different with of sparsely vegelated mountain cultivation elongate fields. south of Channoh village Swamp and plooded land Thy a large island photo back of a brand to natural surrounded by flooder lever cultivated and with land. act of this owner or strip of village with trees, with meandering Tida bordering the Mesong. channels. Then light large rand bons, contribilety brownish green grassland bate. Cultivation on east account will some your bank - broad natural and green meandering

Cambodia - Viet nam Cambrodia 86 amounts of cleared land, level. Meling stretchy varied arrounds of oblite north, much word with large tress; Graided (photo). (alar a meandering stream. a mosair of swamp, East of this a greater offen water book freit, proportion of cleaning and and the colved nice savanna ond grassland will lever Farque Then rather better with demetrical boundaries bereit with ships if clearing (Probably) some areas in it cleared. dark green, probabily border.) they mostly replanted. Then large savanna with some area of dark reddish cultivation some potely from mash with They mountain muddy fronds and green gallery forest along south of the Dol, mith meandering chapmels, of Tay Winh, a big town. then mere dry land in The mountain sovered rice and worded patches, by sparse Irush - south they nother space and of this is grass and ragged, some patches wyorded land. of march, patcherd slifting agricultule Then a morain of varying and of open vice culture cultivation, patches of Towning a morane. genest plantation (or more ?) some was. Then large trees in nows, grass, area of uneven work, rice, village, etc. north probably mostly secondary of meandering river Rach thickety with small cleaving (di Bad). Then morain dull bown and buff-brown. of wet nice and dry areas of small freely Brown ones criss- world by and borner summended trails. This continuous for by bedgerows (photo). Rice some distance with varied

1957 Viet nam 88 Dec. 12 - airtif from Largon is green, brigher land to Clark Field, Philippines buff, draw with dark Intensively cultivated green bedge nows. Some land largely sugar care, legedare march areas in on both side of Rivier & nice, many channels. Largon. Channels and this morare for some dutches lived with tress. distance along muty away from wer land of river large flooded is lingther cultivated, very dreas and ring frield, pale soil, patcher of grost along river, considerable and serule. Amal streams marka massh-lind, some evoded land with ferrare eastward, sparse sent. Rolling Kivier de Laigon in Sistane land west of love Long Be To mostly. More and more river (?) largely in send marsh and wel granted and semb first forme as buigen is approached cultivation expensely vier, alarge canal crossing way, on low spots. Cast of rive as on Wal chart. Then alternating areas of brigher land, entervated give and dry land cultivation. in vice and in garden then an area of serve pratcher they surrounded er souls front with scattered by tall bedge row. Many emergent trees then danses wade. This area intensively frost, then more scule intelized. a town along railrad. Moth approacing without of railroad a morain of areas of house with forlit savanna and some hedgerows and many cultivation, frest predominating small elaborate correlance and striking temples, patiles savanna and cultivation in broad strips with very of planted wood. irregular margins, the Mumosa fundica very abundant along in stry. nost prominent of these following Dong Nai River. They solidly but fronty

and marshy shots. form patches of foreit. a range of hills and much frest to noth of navanna lastward Lavanna more and more inequilarly covered with trees merging into forest they in bully country. they much bright green savanna in hilly areas courses torolly working. The savanna merges will what appears to be should with with the cleared patches. Kange of Is more prominent bills derectly on course well forested, serut on lower wills north of These Clauds observe visibility. Hills covered by asther spans and inequal sent forest, cleared along streams. Frest sparser earlward Some bright green gran compent to northward on hilly mired with freet. Eastward frest is sparen and more in gular, reddish ground showing on low

Cavite Prov. 1957 Vbilippine 97 96 The area of the waterlaid uses gently, with tuff may well never a rolling topography, have been frester though Is the caldera in. this is impossible to In the part the proclastic determine now. The material and ash higher ground was were deposited and doubtley well world subalinally. The consolida. but nothing remains tion is not so complete of this now, The landscape and the material is now a man-may not so impervious ne. Sugar, rice, and The general profile perhaps some other is that of the black field crope are common. soil described on bottom range areas are in part of p.94. Where coconnt plantations. this has not been Mengs, Thrysophyllum, seriously ended the grech, landrium, surface soil, where Vsidium guayava, worked, is black. When annona shp., citrus, ended it is more are generally abundant red-bown, lighter with no obsious require when badly ended. aniangement, especially around houses. Vapayer are scallered as well as in small plantations. lapayer and princapples are in placer planted together. Coffee plantations are shaded by guncidia. 39 179 Prychoting Calvite Province. shrub fruit range, fleshy, possibly slightly immatine. in secondary thickets

ingen - Juan 98 1997 Philippine 25-naviene 99 39130 Fixes

street tree small tree, dissected leaves from sprong from cut stub, figs immature. 3 81 Polyscias common amental should sterile should imital. + 82 Trema on gry course tree 15 m, tall, trunk beneath; fruits blackist. small tree, lastiferous. 3 83 7 icus 1 84 artrearpure vecasional on golf course tree 20 m tall, sterile. 2 75 Septemen repens comministren replace gravelly area, washed very by salt water during typhorn. tufts, sending out runner. creepes syrunge branches y 86 Fieus puntila L. tightly adherent to stone. 4 24 Those with large leaves creeping on old Spanish bridge erect: no frient seen.

1957 Juan 100 Trunks of even the deadest Dec. 16 - Cocos Island looking Carriaring are Effects of typhon sending out tiny green sprouts. Branches led acc. Coast great personnel a apparently so. wind came first from along inner beach on n. E. Then S. E. large crescent there Waves came over west tip seems to have been of island from sea side deposition toward the and even well eastward hans, and removal Here are deposite of greek of at least a dm. or so in the deep front of the coal material up in conserity, exposing the Acaevala which is the upper harts of the body battered but root systems of Carvaing not lead along top of trees and other shrubs. beach, material carried along the beach last up is crarse up to brulders of the thereseems to 3-5 dm. across is have been excavation Casuaring blead in in the concavities and seaward slope, browned deposition back of the on seaward side of thrushet on high ground. cushe. In the interior from beginand part of reep the inner bearly flatform swept elean. the gamely trunks Waves from lagron deposited much sand and som and rubbing. none cobbles and boulders in of the plants seems to grounds of crast granden have suffered very much except caruping hilled where covered by which is very brown any amount of salt water in most place. In Portulars deraces and some Solaces healvoly Cyberus rotundus showing and towneforting are badly fast recovery.

104 1957 marianas), quan 105 Dec. 17 - Kotod, in naval Dec. 16 - Crast from Magazine area. marajan around to Merizo - Trees show grassy slopes, some areas mud browning, much with Micanthur, breaking of branches mostly without micenthus and some of trunks, a but with Paspalum, timbristylis few trees inflooted. In Chrysopogon, stackytarpheta general not as much Hyptis capitata, belevia. depoliation as at 3 and other weedy herbs months after typhomallyn. abundant thickets of ten placer show any Glochidian Fibiscus tiliacon wasting away of sol or compilerous Pandanur. Scatteres effects of flooding by sea trees of Pimenta, Some water. Verhalis mas coemuls and mangre, delvis washed of blown bamboo, Casurina, ele. into Whichets Than in 1950. Soil on slope is odd - a mangrover at merigo stiff black clay about scarcely affected. " Mys 2015-20 cm or more thick, at maragan and elsewhere blocky whendrying, over fround somewhat but a yellow-brown a riellow not broken. Leucarna other clay, also stiff bedruggled looking and plantic, but crummy but what bulled artoraryon when drying. The surface with leaves mostly black layer is erunning fromed where het by when day day on the spray, but recovering. surface when very dry. this area belonged to the agricultural Experiment Station before the war. Cattle evere grazed here. Experimental grass plots nearby.

1957 Marianas Is. Dec. 17 - Kotord beales. of macmongs. of cross Island Road, that of aprintings. quem 107 106 secondary thickets and weedy slopes, listable 100 m. shrub 13 m. tal; fruit 39187 Tarenna sambuing immature. 1 occasional small tree, of m all, 88 Primenta anis racemora strongly aromatic when common, scattered tree, broken; sterile. mos said to have been shower yellow. le whan my introduced before the war. 39 glockidion should a'no tel, leave 90 glochidion marianum glaviour bereath when common young; flower yellow. event, Ing. tall. 91 Seleria locally abundant, prostrate, flower purple. gregarious. 91 (legume) local under mange trees 4 93 deleria on bare soil flower lavender. 94 Hedystis bylong (L.) Lam. new verglocal, on bar soil 195 m. spreading branches. 95 Phyllanthus simples urgatus occasional ered, anomatic, flowers 2 96 Hyptis capitata white "butoner" out stubs alundant sail to course seriously poisoned wounds, sometimes 3 97 tembrityly annus

. Plants seen in bushy pasture, Kotod: Urena lobata Stacky tay heta indica Desmodium triflorum Cestrum himmun Sida acuta Merremia hederacea Ageratum congraides Morinda atrifolia Pridium guajava Triphasia trifolia Pinnenta acris alochidion marianum Nephrolepis hissutula Hyptis capitata Parjalum ortriculare Pasjalum dilatatum Cas Jalum conjugatum chrisojoga acialatus Helistropium oralifolium centella asiatica Carria sophora Ermilia jarranica Cananga ednata Eliphantopus mollis Firmbristylis annua Hitisantiliaceus

50 m spreading

Scleria op. Scalvola sericea Pandamy tectorius Tarenna sambucina Phyllauthus amarus Carrytha filiforms scleria sp. Bambusa vulgario Mangifera india arrama domestica Vernonia cinerea lequine Unlow rediata. Casuarina equisatifolia Prendelephantopus spicatus Corchous acutangulus Dimeria chloridiformis Mitacarpum Hedyotis liflora Malvastrum coromandelianum Flagellaria indica Polypodium scolopendria Pyrassia Davallia solida) on mango I jomola jes-capial Hyptis maveolens Zingiber yerumbet Finition tylis orichotoma F. miliacea Phyllanthus simplex waltheria in dica.

quam 1957 Marianas 113 112 Dec. 18 - months end of anas the conservation anderson an Fore base. in scrubby forest on then soil on timestone 160m prostrate 39201 Stenotaphium micranthun common amal semiopen sports tree \$5 mitall, 3dm, deh, 02 Heritiera longipetioleta Kenel strongly buttiessed; very local on slope flower greenish. 53 maytenus semircandent should flowers white 4-5 parted; oceasional in frest furt immature. Dec. 19 - Dugding conservation 160 m. an woof yigo in Wet Great, mainly Pandanus, V on limestone. 04 asplenium landatum epiphytic on small sapling from curled from dryners 05 asplenium when collected. epiphytic on tree trunks. Grands limb and wilter 06 antrophyum reticulatum from dryner when epiphytic on tree trush Evelected. fynds thin, not very finn, 07 Ophioglossum pendulum hanging vertically; roots rare, epiphytic on tree trunk formling large man. forming a mat fronde 08 Trichomanes curled from dryness. seen on one tree hunts 09 Chyrphyte) epiplaytic on lugenia reinvadions (ctd. on to. 16)

114 Dec. 19. Dagdalg consulation Res Thick degraded frest Trees mostly 5-10 cm. All about 6 m. tall spaced 2-5 m. apart, mostly l'andanus tectorus Premna obtusifolia aglaig Oshrosia oppositifolia Hibisaus tiliaceus Maytenus guarria n. Pangium chule ground cover spaise, mainly small nephrolepis biserrating. Palyhoxin Davallia solida Polyhodium midry Vittaria, Pyrrosia, common. Epiphytic hepatics abundant on trunks + branches, epiphyllous at least on Triphasio leaves. home epiplistic achids. Frequentia Common climbing Thrub layer of Piper, Discoralyse. seedlings of Maytenus W 44

	1141-141		1		377
	116	1957 Maiianas		quam	117
		1ctd from (4.112-113)	160 m.		
mi	39210		-1		
Ш	2 11	Shiphrytic on Triphasia trifolis -	V		
Ш	5 12	epiphytic on quarring			
		epiphytic on so still unto			
ш	2 13	epiphytic on so still roots of landamus tectorius		Thin, not barming a	ushins.
N.		epiphytis on trumb of small tree			
HH-		epiphytic on small brinds			
	3 15				
ш	3 16	epiphyllows on Morinda umbellet	-		
Wil	3 17	epiphyllows on Flagellains			-
	2 10	« piphyllows on aglain -			
OH I	1 18	epiplyllous on Freyeinstia			
	19	statilizable - Diagnoslur			
Ш	4 20	and the same of th	-		
	2 21	egiplistic on Juania			-
	74 2.2	epiphytis on quamia epiphytis on quamia epiphyllous on asplenium nidus epiphyllous on Daval Cig solida epiphyllous on Polypodium scolipinhis			
		epiphyllous on Davallig whide			
	2 33	shiply flows on Polyhodium a Rhendin	J		
	2 74	etich the Anna			
	2 25	- Jugarque en ingraum sy.			
		epiphyllous on Piper guhamense	1		

quam 119 1957 marianas epiphyllous on nephrolepis - +3 epiphyllous on maytenus epiphyllous on Ochrosis of positifolis 30 observis or Triphasia epiphytic on artorapus leaves not strictly distichers, mos or ters inequally amonged. 3 31 Thiridium on coral limestone cobble Looking down on vegetation Dec. 20 - anav - mati Consumbles on terrocer below there Mezerve is very little evidence Edge of cliff - Windof typhoon damage sheared low trush locally at least over 50% Triphang. Transect v, appr. moth but with Maytenus Canthing just inside boundary. Psychotria mariana Fiens prolean T. tinetre 100' through a very serubly ellophyeus. Ochrocarpos, Cyraz Kenna, Unishet-like mest with Jasminum Juamia, few trees above 8 m. tall and Bare rough limestone at idm. thich, some scattered Top of cliff has Fleurya large ones ar emergent rudegalis (toth green and but these have suffered ned, Intulace samoensis much from typhoch Eragrostis citrais, tepturus most abundant smay repens. Wedelia biflina hees are would carpos, var canescens, Hedystis fretide Ochrosig Maglaia, Cycar. var mariannessis, activanthes, Larger trees fremma, ete. Phyllanthus merianis Peperomis Proces of lechum, Tannophyllum Pandenus tectorius, Ochrosis

120 at top of early just worth Thepley to very fewof top of trail made Transect Pyrosia Volyto lium sp.? Davalla 3, in low frest would but not abundant maken lossing 4-5 m. tall, closed, mixed, Trifthasia most abundant. slope gentle, steeper ranseit but present toward top, average 8° slope, Maytenus, Hilviscus tiliacus rough limestone with 12 Cereria, Triphasia, Piper. very little soil. No Macaranga (ran) damage here Vines-alyxin Jasminan, Thounda umbellatas Back from the ridge of which the above is the fine slope year shows effects of is a depression in which drought or of typhon + the front is much more Old leaves tond to rivacis, luxuriant than on the on many plants wary flat limestone farther all been shed. New primadia inland. This broad are growing upright a dom or trongs apparently runs so high. Cut trunks tend to send parallel to the cliff but up rebiral branches. there is no indication Leedlings of aglain lyeas, whather a not it runs dehoverpor, quamia, the whole length of the Mounda citribolio, luphasis, Jasminum common reserve. Panlanus, Toiphasing Cynometra Ochrosia less common. (on Dec. v & this cleaning had been small cleaning on trail lightly burned, the fine gust insid boundary reinning somewhat into the has Aprovolus elongatus woods, affecting the near Stachytarpheta indias end of the transect) Lepturis refers common. One plant of Biolens, was or # r runs north from this cleaning. Transect

122 1957 marianas Dec. 20 - anas Conservation quam 123 39232 Cyperus kyllingia? heads white local in trail banyan type tree, 4 33 Fieus prolice? low, widely spreading; just back from top of eliff, fruit immatine (very large for 7. proling) shrub 1.5' m. tall, fruit 6 34 Psychotria molaspina Men. stems and inflrencences 35 Fleurya moderalis fleshy, green a red. on fitted einesting 36 Eragedstir ciliain on futted limestone as Canthium odoratum ver tinianens in serub on edge of 2 38 Usnea cliff. on stems of Triphasia on exposed cliff, edge Melastoma, Morinda, Dec. 21 - apra Heights Cross Timonius genioctoms Island Road Decaspermula, Chyllanthu. Patch of Casuaring up saffordir, Pandanus tectorino, sono hely 60 8-10 m. tall, 15 cm. doh The blanket of needler growing in area of Dimerio may have an adverse in gentle stope. Ahading effect on the Dinnerin as out the Dimenia but well as the shads. Then unter it are best spaced about 2 m. n flourishing Cerbera, feavols, more but smaller where mystella, Wilsstroema, crowded.

quan 1957 Marianas 127 126 70 04. Dec. 21- south of young 39239 Paspalum bimbriatum . ivadside Dec. 21 Buch of yeing on Every Island Road 90 24. from thickrhizomer. 40 forghum abundant along way Dec, 21 - Crozz Island Road 100 m. 4 41 Machaering megenis in casuaring serang dense patches Dec 32 - Ritidian Voint -Dec. 22 - mt. Tenjo - top is wohing down from densely overfrom with top of eliff reveals very miscanthus with little obdions typhony scattered Rencalna. damage, though my West ride, at end of road Liming say the breadfruit is very densely covered trees in the coconnet plantation Sylericaena. Cast have suffered severe shoulder with more or damage. ters that top is largely Pluchea odorata is evered by Dimeria with still persistent around sparse Barnarina, consideral lighthouse area, though elosin from scars started not common, also seen by military activity. a half him in more Steep slopes densely covered down the road from by this canthus The point. Variation in Frieur proling Const stoped main top with one or two Casinaring treas and is not at all simple dense growth of sencounts for have very large not spechled aire have slander twigs.

1977 Marianas quan 129Dec. 22 - MX. Tenyo care 2 m tall, this the 39242 Miccanthus Christulus Dominant on stey slopes Dec. 22 Minnity Hill, 2.8 m. Cell flower yellow. 43 Crotalaria retura L common in roadside litels Alec. 22- Cotal inservation 190 %. ared, Gross I sland Road in dimeria grassland on flat tof of menter in red day soil erect; glandappendage 44 inphorbin white. 45 I pomoeg littorelis Bl. prostrate erecher, flower purple stigma common locally white, bisapitate. Dec. 27 - Retidian Point 40 Fieus proling var. eliff 170 m should 3 m. tall, lideform. figs almost rips, purplies white to green, speckled were should i'm. tall; sterile. 47 Engenia bryanii (Type tocality) small try, more a less 48 Fixus prolisa vas every habit, figurmentus small try, jugs immating. M5 49 Fiers proline van Dec. 23 - agains framp vin, glowers purplish 51 Phase settingens. roadied; edge of swam

131 13087 100 Dec. 23 - north end of Harmon Field shrub a mitall, leave, 3927 Melochia. grayish, flowers 3 common in secondary served ley prints in center, in limenting whitish distally. Nec. 23 - morthwest comes of y-Piga onewater Keserre 160 m dense tangled moust frest banyan type trey (fallen # 53 Freus prolisa - t but still alex), fruits recasional on tevings and in clusters on main stems. 2 59 lufratio 2 55 mosty trembangan 56 Vittaria m banyan pendent common on the trunks 57 asplemung candalun recarral epithytic on tretund 4 98 arplenium laserfiitiefolium and on the tunte pendent 4 59 Belvisia muranata very common on tree trunks Der. 7:1 south side y-Piga 60 m Conservation reserve. Thick most prest leaver fleshy, not clearly distribute 60 Couling common, epiplingtic of twent on tree trunk

guan 1957 Marianas 133 132 Der. 24 - back of agriculture Demenstration Farm, 1 lam. 39 702 (redis) great in thin worky soil leaves fleshing, not strictly testichous; flowers occasional spiplytic greanish. 1 63 cording) 64 Isora Trianthy Wolk. ther-like shrub 3 m. Tell; flower buds greenish white. occasional

139 Heritiera, ferranthez, etc. race Wilstremia locally common Trees generally about. 3-10 or less m. tall. few over 2 don doh. except Freus Pesonia etc. Dec. 25 - Ritidian Point very rough limestone in rather scrubby freston 165 m. flowers white. 39265 Hedyotis corymbosa 66 Wilestroemia ground of road shrub 25 m, tall with long pendent branchete; locally common are in shall - flowers greenich yellow. 3 67 Wilsstremia opening sterile plant with tager leaves. tree to m. tall, 25 dm. 16h. 68 Heritiera longificato Karel. very raw two old tree see tree 12 m. tal, flat topped, 15 69 Lerianthes nelsoni Mers. with froming green cast; flowers very rave, one tree seen with corolla greenish while, stamens crimsen. Her. 29 south west corner of 1500 northwest Field, south of Ritidian Point erect; rays white. 4 70 Erigermannus Li common locally The Balanoph ne Bulidean Fint. 150 m. flowers wolk will deep ralmen pents; paracite 3 71 Valanophora on Premna obtunifolis (or possibly octasional on ledger of rough limestone

141 140 Dec. 25 - about 1 mi. s. of lotts Junction on bare coral roadside Lober toother; frint immitting 39272 Dentella repeas common. erect, ray white. 3 73 Demo Conyza canadeniis abundant' Dec. 25 - top of cliffs at made 135 m. shoul 2 m. tall; flowers white. 5 74 Desmanthey virghtus rare in thin brush of heucaena, etc. Dec. M- & beach east of 1 m. merizo N. Rosem. tree 5 m. tall, flowers white. 75 Kylocafur moluce angio (land) single tree in open area just black of top of beach. tree 3 m. tell, sterile. Daci 27 - agfarjan Bay 76 Heritiera littoralis single tree near shoe

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Kwajalein 1957 marshall Is. 145 Dec. 28 - Kivajalein J. naval air flation tight mat, fruiting to end. 39277 Chrysopogon aciculatus large patch in lawn, somewhat protected and semi-shaded 79 Calsalpinia major (17 otro) Danly & solitary individual Exell at top of beach in full sun Erron ramp near terminal very low, pitted with got small pothole which tend to be in nows perpendicular to beach, they tending to coalesce into grove Jawn near terminal is a mixture of Dactylocterius Desmodiumcanum, Fimbustyles cymosa, Leptum, Thuala, Vernonia ginera, Eragnostis amabilis. Phyllanthus among Mysopogon Euphorbia prostrata Emphorbia thymitotra, Cenchina exhinatus, Heliotropium ovalifolium, Agnediella Stachytarpheta indica, the last three uncommen. Paspalum vaginatum common near beach

Harvaii 151 Cawaiian Is. 150 Jan 3 - Kilanea Military Camp 1230 M. along rail in sparse vegetation on ash beds Colypremum procumbers L. 39279 Seleranthrus molypumum les ral grasses tida, Jan. 4 - Houth Tout, Kalare Carrie lecherraultran, low regetation on windswell Virolus cistordes, etc. plain and bliffer over sea flower deep magent pink, 80 Portulaca cyanosperma gla on ash between rocker of road well darker toward center and so that stems brownish, fleshy, 81 Vortulaca derecca ascending, fiveren mash between ween of yelow som. aum. rad cut and on plat. ving , fruit ummating, 82 Parsiflora fretidal in goosyfuldis oder disagreeable. common on road cut cliftys. prostrate, stems I m day 33 Jacquemontia sandwicerus branching; flowers pale common in flue stigmai white, spatulate. prostrate, fleshy, flowers 84 Cortulaca cyamospermo Eger common in flut grassland magenta pinh. Jan. 4 South Point Kalas near o 5 m. lighthouse densely carrietose. 85 Fimbrityles cymosa 16th in crevices on boralt terrace prostrute mat-forming whom who . 86 Lesbanis tomentors occasional on flat ask soil prostant, fleshy, very glavery, florous white with granish center. just above sea 37 Helistrofium eurassavium 4. on baralt bench just above sea Lensely caespitore. (etd. 11.154) 88 Findristylis cymosa Kin. very common in to it wise of wells wit by the Etray

Haureis 1958 Kawaiian Do. 161 160 Jan 5 - Mauna Loa, road north-east of Weather Bureau Station bare lava flows 270000. stiff shrub 0.4 m. high 39296 Dubantia ciliolata var junipervides in small liquing of pahochor brigh, fruits purplished. 9150 97 Styphelia douglasii 74 12 m highest altitude observed, an pahaehoe flow 8100') rays yellow 98 Azbochalus radicata 22501 m highest exotic observed (94001) small shub. Vaccinium peleanum shottsb. 28900 on pahochoe lave, occasional small shock, beries reddish 9400) 39300 Vaccinium peleanum skottob. black rolen rige. occasional on patrochoe lava. small shout, beries sed 9400) Vaccinium atiulatum sm. when rife. occasional on prahochoc lava -mal steril shoul. 9400) Voccinium ple peleanum shottly. occasional in prabochoe lava small sprub, fruit immature, 03 Vaccinium reticulatum 5m. occasional on pahochoe have 10,000 small shoul. Vaccinium reticulation 5m. ? 3075 W of Pellala terrifitia 10, 500) 3240 a occasional in crevices my parochoe flow 06 (gran) Trisetum glomeratum (Kuith Tim (0, Base) small tufts recasional ja cravices in palvehre folow var. pruinosum Hook & Wils. det. H.a. miller 1959 07 (moss) Rhacomitium langinosum (Heds, Brit 10, 200) gray very common in moth-facing crevius in polistic flow

Hawaii - Kalvolawa Hawaiian &s. 169 1953 168 Jan. 6 - Kilanea Volcano 1 - 20 m. dish yellow, nays white. galinsoga jarriffora Cav. in streets of military camp 1200 m. small clump, very erect. 12 andropogon flow of crater new Halemauman On Maura for the Metrosikes Thelines minutiples and acaria how do not has become common along from clear belts. Koa is roadsides generally and very common just above even on the crater flow. Kilavea, forming frests, Vulboslylis capillais is as above Bird larky and general on bare ground, at matrosiders is dominant this season the culms are in frests above Kulani a dull orange color. rup to limit of freed though Undropogon sp. is common there is a patch of large along roadrides and scattered was at about 5000. in crater floor. On the rainy side of Kilanea Hyporhoeris is conspicuous Cibotium forms a conspicuous along roadsides. understory in Metrosideros Cilong Volcano Road between Kilanea and Hilo are a great Jan 6. flight Hawaii to Oalin. variety of exotic trees and East slope of Kohala Peninsuly shrubs. Below Mountain View grassy above, more and may what appears to be melorling wooded with ("voroges ?) below, or Heliocapus is abundantly in places back of shore a closed flowering. Locally almost dominant in forest. Trees to 30 Tall, frost, thinking out upward and northward along shore. leaves whitish, especially the West and math slopes of Kahoolacre young ones. I lowers finds. grassy and sparsely covered with only thinly regetated to a considerable Prosofie, especially in navine. north part of plateau mostly altitude, at least 1/4 way to summit, bright red and bare. especially on ridges.

Drine William G. 173 Virginia 172 lan. 26 - Manassas, plantels grounds of old Portner estate tangled woody wine. 39313 Hedera belix L. leaves dull green, vein pale climbing on old tower fruiting branches He Hedera holix b. bushy, fruit not same. quite shorture. som but fruit maline, 14 Hedera helix L Lade Olive- Black. same 3 15 Heden helix L. woody vin, sterile 2 16 Hedera belix L. branches prostrate on climbing on treezand ground, fruiting bushy prostrate in ground climbing in trees; lower dull green with pale veins, fruit blue - black, fleshy

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